

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for changing channel information in a digital TV receiver, the method comprising:

determining changed channel information from a broadcasting signal received at preset time intervals and storing the changed channel information, wherein determining the changed information includes:

determining whether a PMT parsing is an initial program map table (PMT) parsing;

storing PMT information in a first database when the PMT parsing is the initial PMT parsing and storing changed PMT information in a second ~~data base~~ database when the PMT parsing is not the initial PMT parsing; and

comparing the stored changed channel information and channel information stored already, for updating the channel information, wherein the comparing includes comparing a first channel list and a second channel list to determine added channels or canceled channels, and updating the channel information.

2. (Previously Presented) The method of claim 1, wherein the determining comprises determining a version change of the received broadcasting signal.

3. (Currently Amended) The method of claim 2, wherein determining ~~a~~the version change of the received broadcasting signal comprises:

parsing PAT information from a transport stream; and

checking a version number in the parsed PAT information to determine the version change.

4. (Previously Presented) The method of claim 1, further comprises determining whether a repeater has been switched if it is determined that the channel information is changed.

5. (Currently Amended) The method of claim 4, wherein determining whether ~~a~~the repeater has been switched comprises:

storing the changed channel information when it is determined that the repeater is not switched; and

maintaining existing channel information when it is determined that the repeater is switched.

6. (Currently Amended) The method of claim 1, wherein storing the changed information comprises:

starting a program association table (PAT) parsing;

determining whether the PAT parsing is ~~an~~the initial PAT parsing;

storing each channel information in the first ~~data base~~ database to form ~~a~~ the first channel list when it is determined that the PAT parsing is the initial PAT parsing; and

clearing the first channel list, and storing the changed channel information in ~~a~~ the second ~~data base~~ database, to form the second channel list, when it is determined that the PAT parsing is not the initial PAT parsing.

7. (Currently Amended) The method of claim 1, wherein the determining further comprises:

storing the PMT information in the first ~~data base~~ database, and providing a PMT completion signal when the PMT parsing conducted presently is the initial PMT parsing and when the PMT parsing conducted presently is not the initial PMT parsing, storing the changed PMT information in the second ~~data base~~ database; and

providing a PMT completion signal.

8. (Currently Amended) The method of claim 1, wherein the determining further comprises providing a program guide message (PGM) information processing command after storing the PMT information in the first ~~data base~~ database.

9. (Currently Amended) A method for changing channel information in a digital TV receiver, the method comprising:

storing a first channel list in a first ~~data base~~ database;

determining, at preset time intervals, whether channel information has been changed by analyzing a received broadcast signal;

storing a recent version of the channel information when it is determined that the channel information has been changed, wherein storing the recent version includes storing a second channel list in a second ~~data base~~ database; and

updating the channel information by comparing the stored recent version of the channel information with a previous version of the channel information, wherein updating the channel information includes comparing the first channel list with the second channel list to determine added channels or canceled channels.

10. (Currently Amended) The method of claim 9, wherein ~~it is determined~~ determining whether the channel information has been changed ~~by~~ comprises analyzing a version of the received broadcast signal.

11. (Currently Amended) The method of claim 10, wherein analyzing ~~a~~ the version of the received broadcast signal comprises:

parsing program association table (PAT) information from a transport stream; and

checking ~~a~~ the version number in the parsed PAT information to determine if the version of the received broadcast signal has changed.

12. (Currently Amended) The method of claim 10, wherein determining whether the channel information has changed further comprises determining if a repeater has been switched when it is determined that ~~a~~the version of the received broadcast signal has changed.

13. (Currently Amended) The method of claim 12, wherein determining whether the channel information has changed further comprises:

determining that the channel information has changed when it is determined that the repeater has not been switched; and

determining that the channel information has not changed when it is determined that the repeater has been switched.

14. (Currently Amended) The method of claim 9, wherein storing ~~a~~the recent version of the channel information comprises:

starting a program association table (PAT) parsing;

determining whether a present PAT parsing is an initial PAT parsing;

storing information on each channel in the first ~~data base~~ database to form the first channel list when it is determined that the present PAT parsing is ~~an~~ the initial PAT parsing; and

clearing the first channel list, and storing the recent version of the channel information in the second ~~data base~~ database, to form the second channel list, when it is determined that the present PAT parsing is not ~~an~~ the initial PAT parsing.

15. (Currently Amended) The method of claim 14, further comprising:

- providing a program map table (PMT) parsing start command upon completion of the PAT parsing;
- determining whether a present PMT parsing is an initial (PMT) parsing;
- storing PMT information in the ~~first data base~~ database, and providing a PMT completion signal when it is determined that the present PMT parsing is ~~an~~ the initial PMT parsing;
- when it is determined that the present PMT parsing is not ~~an~~ the initial PMT parsing, storing PMT information in the ~~second data base~~ database;
- updating the channel information upon completion of the comparison of the first channel list and the second channel list; and
- providing a PMT completion signal.

16. (Currently Amended) The method of claim 15, further comprising providing a program guide message (PMM) information processing command after storing the PMT information in the ~~first data base~~ database.

17. (Currently Amended) The method of claim 13, wherein storing ~~a~~ the recent version of the channel information comprises:

- storing the recent version of the channel information when it is determined that the channel information has changed; and

maintaining a previous version of the channel information when it is determined that the channel information has not changed.

18. (Currently Amended) A computer program embodied on a computer-readable medium for changing channel information in a digital TV receiver, wherein the computer program, when executed by a computer, performs a method comprising:

storing a first channel list in a ~~first data base~~ database;

determining, at preset time intervals, whether channel information has been changed by analyzing a received broadcast signal;

storing a recent version of the channel information when it is determined that the channel information has been changed, wherein storing the recent version includes storing a second channel list in a ~~second data base~~ database; and

updating the channel information by comparing the stored recent version of the channel information with a previous version of the channel information, wherein updating the channel information includes comparing the first channel list with the second channel list to determine added channels or canceled channels.

19. (Currently Amended) The computer program of claim 18, wherein determining, at the preset time intervals, whether the channel information has been changed comprises:

demultiplexing a transport stream to extract program association table (PAT) information;

reading a version number from the PAT information; and
determining if the read version number is different than a previous version number.

20. (Currently Amended) The computer program of claim 19, wherein the determining further comprises:

determining if a repeater has been switched;
determining that the channel information has been changed when ~~a~~the repeater has not been switched and the read version number is different than a previous version number;
and

determining that channel information has not been changed when ~~a~~the repeater has been switched and the read version number is different than a previous version number.

21. (Currently Amended) The computer program of claim 18, wherein storing ~~a~~the recent version of the channel information when it is determined that the channel information has been changed comprises:

starting a program association table (PAT) parsing;
determining whether a present PAT parsing is ~~an~~the initial PAT parsing;

storing information on each channel in the first ~~data base~~ database to form the first channel list when it is determined that the present PAT parsing is ~~an~~ the initial PAT parsing; and

clearing the first channel list, and storing the recent version of the channel information in the second ~~data base~~ database, to form the second channel list, when it is determined that the present PAT parsing is not ~~an~~ the initial PAT parsing.

22. (Currently Amended) The computer program of claim 21, wherein updating the channel information comprises:

initiating a program map table (PMT) parsing;

determining whether a present PMT parsing is ~~an~~ the initial (PMT) parsing;

storing PMT information in the first ~~data base~~ database, and providing a PMT completion signal when it is determined that the present PMT parsing is ~~an~~ the initial PMT parsing;

when it is determined that the present PMT parsing is not ~~an~~ the initial PMT parsing, storing PMT information in the second ~~data base~~ database;

updating the channel information upon completion of the comparison of the first channel list and the second channel list; and

providing a PMT completion signal.

23. (Currently Amended) The computer program of claim 22, wherein the method includes providing a program guide message (PMM) information processing command after storing the PMT information in the ~~first data base~~ database.

24. (New) The method of claim 4, wherein the repeater comprises a repeater of a satellite broadcasting system.

25. (New) The method of claim 1, wherein the changed PMT information stored in the second database includes changed channel information.

26. (New) The method of claim 12, wherein the repeater comprises a repeater of a satellite broadcasting system.

27. (New) The method of claim 9, wherein the recent version of the channel information stored in the second database includes changed channel information.

28. (New) The computer program of claim 20, wherein the repeater comprises a repeater of a satellite broadcasting system.

Serial No. 09/310,091

Docket No. K-0089

Reply to Office Action dated July 1, 2005

29. (New) The computer program of claim 18, wherein the recent version of the channel information stored in the second database includes changed channel information.